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(12) United States Patent

Anathan et al.

(54) DUAL WORK FUNCTION RECESSED ACCESS DEVICE AND METHODS OF FORMING

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(57) ABSTRACT

A recessed access device having a gate electrode formed of two or more gate materials having different work functions may reduce the gate-induced drain leakage current losses from the recessed access device. The gate electrode may include a first gate material having a high work function disposed in a bottom portion of the recessed access device and a second gate material having a lower work function disposed over the first gate material and in an upper portion of the recessed access device.

22 Claims, 8 Drawing Sheets

